

Source Water Assessment Program (SWAP) Report For Bolton Corners



Prepared by the
Massachusetts Department of
Environmental Protection,
Bureau of Resource Protection,
Drinking Water Program

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Table 1: Public Water System (PWS) Information

<i>PWS NAME</i>	Bolton Corners
<i>PWS Address</i>	Route 117
<i>City/Town</i>	Bolton
<i>PWS ID Number</i>	2034006
<i>Local Contact</i>	Fred Freidius
<i>Phone Number</i>	(978) 779-2703

<i>Well Name</i>	<i>Source ID#</i>	<i>Zone I (in feet)</i>	<i>IWPA (in feet)</i>	<i>Source Susceptibility</i>
WELL #1	2034006	205	511	MODERATE

What is SWAP?

The Source Water Assessment Program (SWAP) established under the federal Safe Drinking Water Act requires every state to:

- ? inventory land uses within the recharge areas of all public water supply sources;
- ? assess the susceptibility of drinking water sources to contamination from these land uses; and
- ? publicize the results to provide support for improved protection.

Maintaining Your Good Water Quality

Susceptibility of a drinking water source does *not* imply poor water quality. Actual water quality is best reflected by the results of regular water tests.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

INTRODUCTION

We are all concerned about the quality of the water we drink. Drinking water wells may be threatened by many potential contaminant sources, including septic systems, road maintenance, and improper disposal of hazardous materials. Citizens and local officials can work together to better protect these drinking water sources.

Purpose of this report:

This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential contaminant sources, the assessment helps focus protection efforts on appropriate best management practices (BMPs) and drinking water source protection measures. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

This report includes:

1. Description of the Water System
2. Discussion of Land Uses within Protection Areas
3. Recommendations for Protection
4. Attached Map of the Protection Areas
5. Appendices

1. DESCRIPTION OF THE WATER SYSTEM

The Well

The well for Bolton Corners is located about 40 feet east of the on-site building, and about 200 feet from Route 117. Please refer to the attached map of the Zone I and IWPA. The water does not receive any treatment at the time of this report. For current information on monitoring results and treatment, please contact the Bolton Corners for complete water quality and treatment information contact the person listed above in Table 1.

What is a Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and an Interim Wellhead Protection Area (IWPA).

- **The Zone I** is the area that should be owned or controlled by the water supplier and limited to water supply activities.

- **The IWPA** is the larger area that is likely to contribute water to the well.

In many instances the IWPA does not include the entire land area that could contribute water to the well. Therefore, the well may be susceptible to contamination from activities outside of the IWPA that are not identified in this report.

What is Susceptibility?

Susceptibility is a measure of a well's potential to become contaminated due to land uses and activities within the Zone I and Interim Wellhead Protection Area (IWPA).

2. DISCUSSION OF LAND USES IN THE PROTECTION AREAS

There are a number of land uses and activities within the drinking water supply protection areas that are potential sources of contamination.

Key issues include:

1. **Inappropriate activities in Zone I;**
2. **Highway and local road;**
3. **Septic system; and**
4. **Transmission line right of way.**

The overall ranking of susceptibility to contamination for the well is Moderate, based on the presence of moderate threat land uses or activities in the IWPA.

1. **Zone I**- Currently, the well does not meet DEP's restrictions for Zone I, which only allow water supply related activities in Zone Is. The Zone I contains the on-site building, parking spaces, and highway. Please note that systems not meeting DEP Zone I requirements must get DEP approval and address Zone I issues prior to increasing water use or modifying systems.
2. **Transportation corridor** – A portions of Route 495 is located within the IWPA of the well, and a portion of Main street (Route 117) is located within the Zone I and IWPA. Transportation corridors can be a potential source of contamination from road salt or accidental leaks or spills.
3. **Septic system** – The septic system is within the Zone I and IWPA. It is pumped yearly. The age of the tank, its construction, and construction material all contribute to making this an important issue for drinking water source protection.
4. **Transmission line right of way** – The line lies within the Zone I and IWPA. The potential contamination is the spraying of herbicide by the utility company for clearing.

Table 2: Table of Activities within the Water Supply Protection Areas

Facility Type	Potential Contaminant Sources	Zone I	IWPA	Threat	Comments
Commercial Property	Parking lot	Yes	Yes	Moderate	Limit road salt usage and provide drainage away from wells
	Septic System	Yes	Yes	Moderate	See attached brochure on septic systems
	Transportation corridor	Rt. 117	Route 117 & 495	Moderate	Hazardous material transportation

* -For more information on Contaminants of Concern associated with individual facility types and land uses please see the SWAP Draft Land Use / Associated Contaminants Matrix on DEP's website - www.state.ma.us/dep/brp/dws/.

Glossary

Zone I: The area closest to a well; a 100 to 400 foot radius proportional to the well's pumping rate. To determine your Zone I radius, refer to the attached map.

IWPA: A 400 foot to ½ mile radius around a public water supply well proportional to its pumping rate; the area DEP recommends for protection in the absence of a defined Zone II. To determine IWPA radius, refer to the attached map.

Zone II: The primary recharge area defined by a hydrogeologic study.

Aquifer: An underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

Hydrogeologic Barrier: An underground layer of impermeable material that resists penetration by water.

Recharge Area: The surface area that contributes water to a well.

Implementing the following recommendations will reduce the system's susceptibility to contamination.

3. PROTECTION RECOMMENDATIONS

Bolton Corners should review and adopt the following recommendations:

Zone I:

- ✓ Remove all non-water supply activities from Zone I to comply with DEP's Zone I requirements. Please note that water systems not meeting DEP Zone I requirements must get DEP approval and address Zone I issues prior to increasing water use or modifying system.
- ✓ Do not use road salt within Zone I.

Training and Education:

- ✓ Instruct tenants on proper hazardous material transportation, disposal, emergency response and best management practices; include custodial staff, groundskeepers, and certified operator.
- ✓ Post drinking water protection area signs at key visibility locations.

Facilities Management:

- ✓ Implement standard operating procedures regarding proper storage, use, transportation and disposal of hazardous materials and waste. To learn more, see the hazardous materials guidance manual at <http://www.dep.state.ma.us/dep/bwp/dhm/dhmpubs.htm>
- ✓ Implement Best Management Practices (BMPs) for the use of fertilizer, herbicides and pesticides on Bolton Corner's property (see Attached flier).
- ✓ The septic system components should be located, inspected, and maintained on a regular basis. See the attached brochure for more information regarding septic systems (see attached brochure)

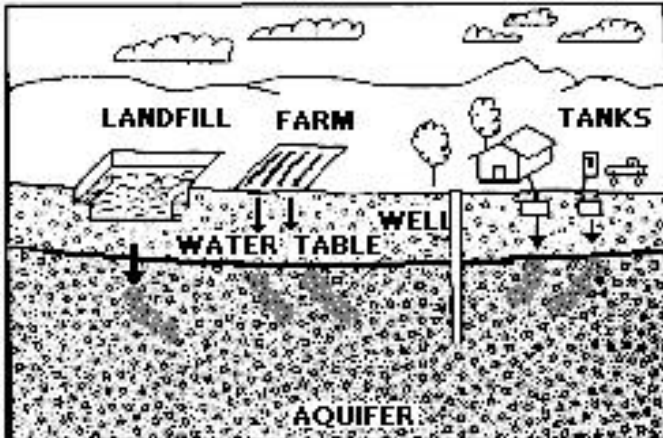


Figure 1: Example of how a well could become contaminated by different land uses and activities.

Planning:

- ✓ Work with local officials in Bolton to include Bolton Corner's IWPA in Aquifer Protection District Bylaws and other regulations and to assist you in improving protection.
- ✓ Supplement the SWAP assessment with additional local information and incorporate it into water supply educational efforts. Use a potential contaminant threat inventory to assist in setting priorities, focusing inspection, and creating educational activities.

These recommendations are only part of your ongoing local drinking water source protection. Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures

For More Information:

Contact Josephine Yemoh-Ndi in DEP's Worcester Office at (508) 792-7650 x 5030 for more information and for assistance in improving current protection measures.

More information relating to drinking water and source protection is available on DEP's web site at:
www.state.ma.us/dep/brp/dws.

Copies of this assessment have been provided to the water department, town boards, the town library and the local media.

Attachments:

- Map of the Public Water Supply (PWS) Protection Area.
- Recommended Source Protection Measures Factsheet
- Your Septic System Brochure